REMARKS

Claims 1-16 are pending in the application.

By the foregoing Amendment, claims 1-9 are amended. New claims 10-16 are added. The specification is amended to provide an explicit definition for the term "path," which is used throughout the specification, and also to correct several instances where the term "branch" was inadvertently used instead of "path." Conforming amendments are made to claims 5 and 6. Claims 5 and 7 also are amended to replay "hierarchy" with the equivalent term "hierarchical structure" for consistency with the other claims.

These changes are believed not to introduce new matter, and entry of the Amendment is respectfully requested.

Based on the above Amendment and the following Remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections, and withdraw them.

Rejection under 35 U.S.C. § 112, ¶ 2

In paragraph 1 of the Office Action, claims 1 and 9 were rejected under section 112, paragraph 2 on the basis that "expand/collapse" was considered unclear. This rejection is believed to be overcome by the amendment of claim 1 to recite "expand-and-collapse" and by the amendment of claim 9 to recite "expanded-and-collapsed".

In paragraph 2 of the Office Action, claims 2 and 3 were rejected due to "insufficient antecedent basis" for the limitation "a dynamic menu." This rejection is believed to be rendered moot by the above amendments to claims, by which each of the "means" is now preceded by a modifier, which obviates the need to recite the functions of the various means each time they are recited.

This alternative language for reciting the "means" is believed to have the same meaning as the original language, and this is not believed to change the scope or meaning of the claims. In this connection, it is respectfully submitted that the original reference to "means for displaying a dynamic menu" in claims 2 and 3 was entirely consistent with, and in compliance with, section 112, paragraph 2.

In claim 1, "a dynamic menu" does not stand by itself as a separate limitation, but is part of the limitation "means for displaying a dynamic menu..." Claims 2 and 3, referring back to this limitation in claim 1, accordingly recite "the means for displaying a dynamic menu," as the recitation in claim 1 of "means for displaying a dynamic menu" provides antecedent basis therefor. The "means for displaying a dynamic menu" recited in claims 2 and 3 is the same "means for displaying a dynamic menu" recited in claim 1.

In paragraph 3 of the Office Action, claim 4 was rejected for lack of antecedent basis for "the path." This rejection is respectfully traversed.

MPEP § 2173.05(e) states in pertinent part:

> If the scope of a claim would be reasonably ascertainable by those skilled in the art, then the claim is not indefinite. *Ex parte Porter*, 25 USPQ2d 1144, 1145 (Bd. Pat. App. & Inter. 1992) ("controlled stream of fluid" provided reasonable antecedent basis for "the controlled fluid"). ***Inherent components of elements recited have antecedent basis in the recitation of the components themselves.*** For example, the limitation "the outer surface of said sphere" would not require an antecedent recitation that the sphere has an outer surface. [Emphasis added.]

A hierarchical structure having multiple levels of nodes inherently has paths between parent and child nodes, which include paths of parent nodes from a root node to a selected node. Therefore, "the path" has antecedent basis in the recitation of the hierarchical structure.

In paragraph 4 of the Office Action, claim 4 was rejected for indefiniteness due to inclusion of a parenthetical expression. This rejection is overcome by the amendment of claim 4 to replace "(hierarchy fully collapsed)" with "when the hierarchical structure is fully collapsed."

In paragraph 5 of the Office Action, claims 6 and 8 were rejected for lack of antecedent basis for "the branch." To the extent the Examiner may consider this rejection to be applicable to claims 5, 6, and 8 as amended to recite "the path" instead of "the branch," and by claim 6 as further amended to depend from claim 4, it is respectfully traversed for the reasons stated above with respect to the rejection of claim 4.

Rejection under 35 U.S.C. § 101

In paragraph 6 of the Office Action, claims 1-8 were rejected under section 101 as being directed to non-statutory subject matter. This rejection is respectfully traversed.

The limitations in issue of claim 1-8 are written in "means plus function" format pursuant to the provisions of 35 U.S.C. § 112, paragraph 6. Thus, as stated in MPEP 2181, and in accordance with the Federal Circuit's decision in In re Donaldson, 16 F.3d 1189, 29 USPQ2d 1845 (Fed. Cir. 1994),:

> [T]he 'broadest reasonable interpretation' that an examiner may give means-plus-function language is that statutorily mandated in paragraph six. Accordingly, the PTO may not disregard the structure disclosed in the specification corresponding to such language when rendering a patentability determination.

The Office's "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility," OG Notices: 22 November 2005, further provides:

> USPTO personnel are to correlate each claim limitation to all portions of the disclosure that describe the claim limitation. This is to be done in all cases whether or not the claimed invention is defined using means or step plus function language. The correlation step will ensure that USPTO personnel correctly interpret each claim limitation.
>
> * * *
>
> ... Where means plus function language is used to define the characteristics of a machine or manufacture invention, claim limitations must be interpreted to read on only the structures or materials disclosed in the specification and "equivalents thereof." Two en banc decisions of the Federal Circuit have made clear that the USPTO is to interpret means plus function language according to 35 U.S.C. Sec. 112, sixth paragraph. *In re Donaldson*, 16 F.3d 1189, 1193, 29 USPQ2d 1845, 1848 (Fed. Cir. 1994) (in banc); *In re Alappat*, 33 F.3d 1526, 1540, 31 USPQ2d 1545, 1554 (Fed. Cir. 1994) (*in banc*).
>
> * * *
>
> To properly determine whether a claimed invention complies with the statutory invention requirements of 35 U.S.C. 101, USPTO personnel must first identify whether the claim falls within at least one of the four enumerated categories of patentable subject matter recited in section 101 (process, machine, manufacture or composition of matter).

Looking to the specification of the present application, paragraph 00047 states:

> It will be understood that the multilevel expand/collapse software utility can be implemented by computer program instructions. *These computer program instructions may be provided to a processor* of a general purpose computer, special purpose computer, or other programmable data processing apparatus to produce a machine, *such that the instructions*, which execute via the processor of the computer or other programmable data processing apparatus, *create means for implementing the functions described above.*

In other words, the "means" recited in claims 1-8 are the processor of a computer or other programmable data processing apparatus, and equivalents thereof, in the act of implementing the functions performed by the recited means.

As such a processor and equivalents fall within "one of the four enumerated categories of patentable subject matter recited in section 101 (process, machine, manufacture or composition of matter," it is respectfully submitted that the invention as recited in claims 1-8 *prima facie* constitutes statutory subject matter under section 101.

Rejections under 35 U.S.C. § 103

In paragraph 7 of the Office Action, claims 1-9 were rejected under section 103 as being unpatentable over Pajak et al. This rejection is respectfully traversed as being based upon a reference that does not teach or suggest the claimed invention.

Pajak et al. is directed to a method and apparatus of accessing and displaying hierarchical files on an electronic workstation screen . Key to the distinction between the claimed invention and Pajak et al. is the definition of "Navigational Aid." In the present invention, it is not the hierarchy itself that is the navigational aid. Instead, it is the novel means for displaying a dynamic menu, which when combined with the means for displaying a multilevel hierarchical structure and a conventional expand/collapse icon, that provides the navigation aid. The hierarchy itself is ubiquitous in the art and significantly predates Pajak et al. (examples include Apple Macintosh OS1 and Xerox PARC).

Furthermore, there are many significant differences between the claimed invention and Pajak. Pajak describes a variation of a hierarchical structure (general tree structures significantly predate Pajak) that relies on highlighting items within the hierarchy to act upon them. Pajak adds a menu allowing the user to open/close the selected items either one more level, or to the end. Pajak does not include options to expand to any other specific depth (as recited in claim 8), except by repeating that action. Neither does Pajak indicate *a priori* how many descendant levels there are (as recited in claim 6), nor how many items would be displayed at each level of expansion (as recited in claim 7).

The claimed invention does not rely on selection within the hierarchy, *per se*. Rather, because as recited in claim 1, the navigation aid includes menu display means for displaying a dynamic menu associated with a node displayed in the hierarchical structure when the cursor is hovered over an activator used to swap the expanded/collapsed state of a the node, it creates a separate menu for each node displayed in the hierarchy, and the user can act directly on that menu through the expand/collapse icon for that node. The menu displayed by the menu display means includes information about the ancestry of the node, and the ability to close any ancestor displayed within the menu from the menu itself (negating the need to scroll up a potentially long distance to locate the ancestor). The menu also includes information about the number of levels of descendants, the number of descendants at each level, and the ability to expand to any depth with a single menu selection by selecting the desired depth from the menu.

With respect to menu, expand-and-collapse, and statistics, some of the specific differences between the claimed invention and Pajak et al. can be summarized as follows:

	Claimed invention	***Pajak et al.***
"menu"	A separate menu is associated with each visible node in the hierarchy, accessed by acting directly on the expand/collapse icon associated with that node. The menu acts upon the node beneath the cursor when it is activated, and those nodes associated with it in its path (i.e., a direct line of ancestry or descent).	The menu is a menu of commands, accessed on the window header. (e.g. the triple bar icon). Commands from the triple bar menu act upon whatever nodes are selected in the display.

	Claimed invention	***Pajak et al.***
"expand/collapse"	The menu lists the total number of levels of ancestry or descent associated with the specific menu for that node, lists the number of additional nodes which would be displayed if the hierarchy were opened to any level of depth, and allows the user to open to exactly any selected level of depth with a single action. To display the first 5 levels of a 10 level hierarchy, the user would hover over the root node of the hierarchy, choose "expand to level 5 (1,328 items)."	Pajak allows the user to completely expand/collapse or to expand/collapse one additional level. For instance, if a hierarchy had 10 levels, but the user only wanted to expand the hierarchy to show the first 5 levels, it would take the user 4 separate actions with the triple bar menu: 1. open the root level to show the second level 2. open one more level to show the third level 3. open one more level to show the fourth level 4. open one more level to show the fifth level Pajak does not support or anticipate opening a specific number of levels. Only 1 more level or "all."

	Claimed invention	***Pajak et al.***
"statistics"	The menu collects and displays statistics indicating how many additional items will be displayed if the hierarchy should be expanded to any given depth. (e.g. 4 items; 44 items).*	Pajak does not indicate how many additional items will be displayed if an additional level were to be opened. See, for example, column 7, lines 58-67, which is silent as to these statistics: In accordance with another feature of the present invention, folders and file drawers open as before, showing just the icons directly inside (as shown in FIG. 3). To display icons within the icons in the open folder or drawer window, a folder pop-up menu in the window header 40 is accessed by use of cursor 42, illustrated in FIG. 7. Various options are then available to the workstation user. For example, "Show One More Level" will display the icons inside the icons in the open folder or file drawer window by selective operation of cursor 42 and mouse 30. Selecting "Show One More Level" again will display the icons within the icons inside the icons in the open folder, as illustrated in FIG. 8. The hierarchy itself shows how many items are currently displayed, but does not indicate how many descendants.

Claim 2 recites that the menu display means includes means for gathering statistics about the current state of the hierarchical structure, and wherein the dynamic menu displayed by the menu display means contains information that is generated dynamically from the statistics. In other words,

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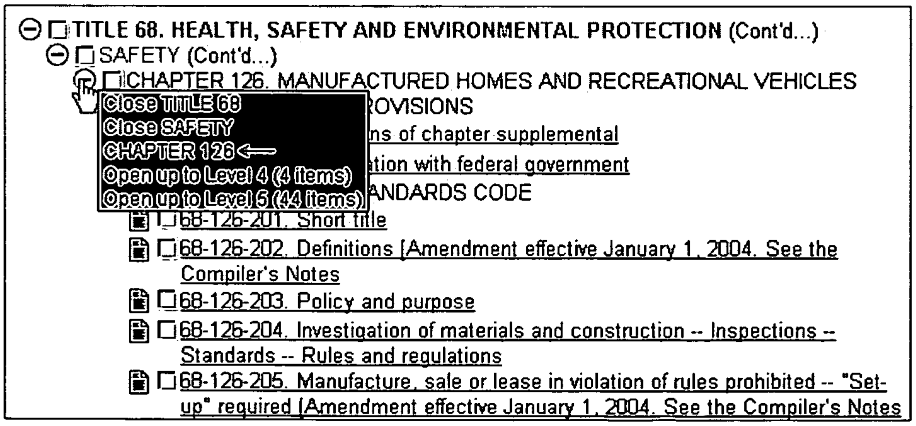

⊖ ☐ TITLE 68. HEALTH, SAFETY AND ENVIRONMENTAL PROTECTION (Cont'd...)
⊖ ☐ SAFETY (Cont'd...)
⊖ ☐ CHAPTER 126. MANUFACTURED HOMES AND RECREATIONAL VEHICLES
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ANDARDS CODE
☐ 68-126-201. Short title
☐ 68-126-202. Definitions [Amendment effective January 1, 2004. See the Compiler's Notes
☐ 68-126-203. Policy and purpose
☐ 68-126-204. Investigation of materials and construction -- Inspections -- Standards -- Rules and regulations
☐ 68-126-205. Manufacture, sale or lease in violation of rules prohibited -- "Set-up" required [Amendment effective January 1, 2004. See the Compiler's Notes

FIGURE A

	Claimed invention	**Pajak et al.**
"statistics"	The menu collects and displays statistics indicating how many additional items will be displayed if the hierarchy should be expanded to any given depth. (e.g. 4 items; 44 items).	Pajak does not indicate how many additional items will be displayed if an additional level were to be opened. See, for example, column 7, lines 58-67, which is silent as to these statistics: In accordance with another feature of the present invention, folders and file drawers open as before, showing just the icons directly inside (as shown in FIG. 3). To display icons within the icons in the open folder or drawer window, a folder pop-up menu in the window header 40 is accessed by use of cursor 42, illustrated in FIG. 7. Various options are then available to the workstation user. For example, "Show One More Level" will display the icons inside the icons in the open folder or file drawer window by selective operation of cursor 42 and mouse 30. Selecting "Show One More Level" again will display the icons within the icons inside the icons in the open folder, as illustrated in FIG. 8. The hierarchy itself shows how many items are currently displayed, but does not indicate how many descendants.

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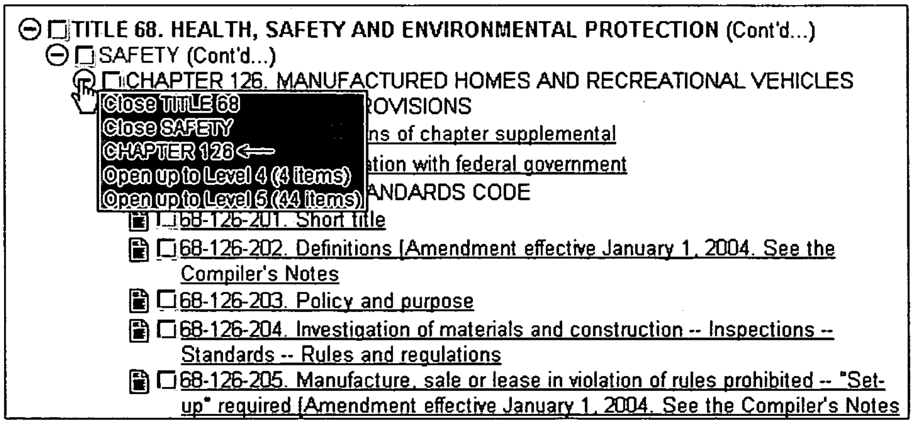

TITLE 68. HEALTH, SAFETY AND ENVIRONMENTAL PROTECTION (Cont'd...)
SAFETY (Cont'd...)
CHAPTER 126. MANUFACTURED HOMES AND RECREATIONAL VEHICLES
ROVISIONS
ns of chapter supplemental
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68-126-201. Short title
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68-126-203. Policy and purpose
68-126-204. Investigation of materials and construction -- Inspections -- Standards -- Rules and regulations
68-126-205. Manufacture, sale or lease in violation of rules prohibited -- "Set-up" required [Amendment effective January 1, 2004. See the Compiler's Notes

FIGURE A

	Claimed invention	*Pajak et al.*
"statistics"	The menu collects and displays statistics indicating how many additional items will be displayed if the hierarchy should be expanded to any given depth. (e.g. 4 items; 44 items).	Pajak does not indicate how many additional items will be displayed if an additional level were to be opened. See, for example, column 7, lines 58-67, which is silent as to these statistics: In accordance with another feature of the present invention, folders and file drawers open as before, showing just the icons directly inside (as shown in FIG. 3). To display icons within the icons in the open folder or drawer window, a folder pop-up menu in the window header 40 is accessed by use of cursor 42, illustrated in FIG. 7. Various options are then available to the workstation user. For example, "Show One More Level" will display the icons inside the icons in the open folder or file drawer window by selective operation of cursor 42 and mouse 30. Selecting "Show One More Level" again will display the icons within the icons inside the icons in the open folder, as illustrated in FIG. 8. The hierarchy itself shows how many items are currently displayed, but does not indicate how many descendants.

Claim 2 recites that the menu display means includes means for gathering statistics about the current state of the hierarchical structure, and wherein the dynamic menu displayed by the menu display means contains information that is generated dynamically from the statistics. In other words,

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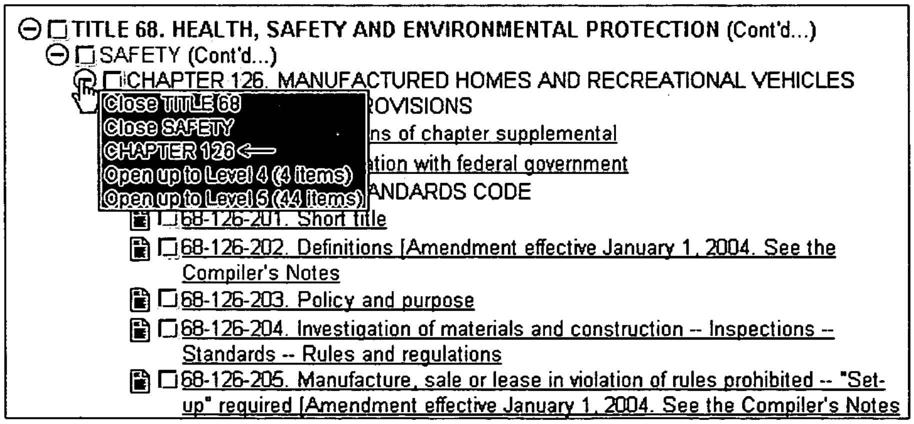

⊖ ☐ TITLE 68. HEALTH, SAFETY AND ENVIRONMENTAL PROTECTION (Cont'd...)
⊖ ☐ SAFETY (Cont'd...)
☐ CHAPTER 126. MANUFACTURED HOMES AND RECREATIONAL VEHICLES
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☐ 68-126-203. Policy and purpose
☐ 68-126-204. Investigation of materials and construction -- Inspections -- Standards -- Rules and regulations
☐ 68-126-205. Manufacture, sale or lease in violation of rules prohibited -- "Set-up" required [Amendment effective January 1, 2004. See the Compiler's Notes

FIGURE A

the display means includes means that gathers and displays information about any node in the display within the dynamic menu, not just the ancestry to the root node, but also the number of levels and items contained within descendent nodes which are not revealed in the hierarchy tree without the menu. Pajak does not display node-specific information within their menu.

Claim 3 depends from claim 2 and recites that the menu display means further includes means for adjusting the information based on the selected node's position within the hierarchical structure. The invention recited in claim 3 is respectfully submitted to be patentable over Pajak for the reasons discussed in the preceding paragraph with respect to the rejection of claim 2.

Further, although Pajak's hierarchy, itself, does display ancestry information, Pajak does not display descendent information, and does not update its navigation menu based on location within the hierarchy. The claimed invention displays this information directly within the dynamic menu in a concise way, such that it is not necessary to scroll within a large open hierarchy to know where a specific node is, or to act upon it.

Claim 4 depends from claim 3 and recites that the dynamic menu identifies, by one of node name and level number, the path of parent nodes from the root node, when the hierarchical structure is fully collapsed, to the selected node. Although Pajak's hierarchy identifies nodes by name, Pajak's *menu* does not. Because Pajak requires the user to select nodes to act on prior to taking an action, column 3, lines 25-30 refer to indicating which nodes within a hierarchy are selected for action:

> The present invention is a method of accessing and displaying hierarchical files on an electronic workstation screen that includes: ... (5) Iconic Pretty-Printing, that is, the icon optionally combined with text is offset as a function of its depth in a hierarchy including, (6) "Folding of the display" when the indentation reaches a desired column width (In this case a folding indicator is added to indicate the presence of a deeper hierarchy represented in the form of a fold), (7) Hierarchical

> Selection or highlighting based on directory contents - a visual method of indicating the extent of the contents of a folder or directory, including visual highlighting indicating the files that will be affected by any operation, e.g. copy, move, or delete, and (8) the visualization of nested hierarchal relationships for the movement of icons and folders.

The claimed invention does not require "selection" per se to occur prior to action. The claimed invention's menu operates on a single node (to expand or collapse it to a specific depth) by direct action on that node (or semi-directly via the node's menu, depending upon your point of view). The invention as recited in claim 4 refers to providing enough information within the menu so that a user will know where that node exists within the hierarchy, and what the consequences of the action will be (e.g., show an additional 2 levels containing 44 items.)

Claim 5 recites that the dynamic menu also identifies what level of expansion, within this path of the hierarchical structure, the selected node resides. Claim 5 refers to the menu, not the hierarchy. Pajak's menu does not indicate location or expansion state. That information is conveyed within Pajak's hierarchy.

Claim 6 recites that the dynamic menu identifies how many additional levels this particular path of the hierarchical structure can be expanded. Pajak's menu does NOT indicate how many additional levels may be expanded. Pajak allows the ability to show all levels, but does not indicate *a priori* how many levels that will be, nor how many items will be displayed. The user must perform the action and display those items. With large hierarchies, this is a serious problem for users. For instance, as shown in the following illustration, hovering over Title 7 of the US Code indicates that expanding that node to the fourth level will show 2991 items:

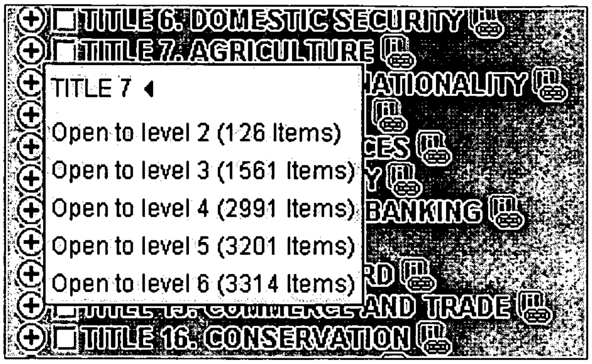
TITLE 6: DOMESTIC SECURITY
TITLE 7: AGRICULTURE
TITLE 7
Open to level 2 (126 Items)
Open to level 3 (1561 Items)
Open to level 4 (2991 Items)
Open to level 5 (3201 Items)
Open to level 6 (3314 Items)
ATIONALITY
CES
BANKING
AND TRADE
TITLE 16: CONSERVATION

FIGURE B

The user is likely to decide that would be too much information to display at once, and choose to expand the hierarchy one node at a time. For reference, with a single menu selection, Pajak would only allow the user to open to level 2 or to level 6. Opening to levels 3-5 would require additional actions. Also, Pajak requires the user to select nodes within the hierarchy to act upon prior to performing the action. Therefore, the user must move the mouse into the hierarchy and select the node/s to act upon, then move the mouse back up to the window header, activate the triple bar menu, and select an option.

With respect to claim 7, see the above comments relating to the rejection of claim 6. Pajak does NOT indicate to the user how many descendant nodes will be shown prior to taking the action.

With respect to claim 8, see the above comments relating to the rejection of claim 5.

In view of the foregoing, it is respectfully submitted that the invention as recited in claims 1-8 is patentable over Pajak.

Conclusion

All objections and rejections have been complied with, properly traversed, or rendered moot. Thus, it now appears that the application is in condition for allowance. Should any questions arise, the Examiner is invited to call the undersigned representative so that this case may receive an early Notice of Allowance.

Favorable consideration and allowance are earnestly solicited.

Respectfully submitted,

JACOBSON HOLMAN PLLC

Date: August 3, 2006

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